

CLAIMS

1. An engine including one or more cylinder and piston groups disposed in or on
a rotating member, the longitudinal axis of the one or more cylinder and piston
5 groups being orientated tangential to the rim of the rotating member, and
wherein both the cylinders and pistons rotate continuously relative to a
stationary part of the engine.
2. An engine including:
10 a rotatable member;
one or more cylinders disposed around the circumference of the
rotatable member, the longitudinal axis of the cylinders being tangential to the
circumference of the rotatable member; and
one or more pistons, each piston associated with a corresponding
15 cylinder,
the engine characterised in that each piston is associated with a piston
lever pivoted eccentric to the rotatable member and wherein movement of
each piston is controlled such that combustion energy is transmitted to the
rotatable member by the cylinder moving away from the piston.
- 20 3. An engine as claimed in claim 2 wherein movement of each piston is
controlled independently of rotation of the rotatable member.
4. An engine as claimed in claim 2 ~~(or claim 3)~~ wherein the piston is engaged,
25 either directly or via a connection rod, to the distal end of the piston lever, the
proximal end of the piston lever being manipulated to control movement of the
piston relative to the cylinder.
5. An engine as claimed in any one of claims 2 to 4 wherein one or more piston
30 controllers are disposed adjacent the proximal end of the piston lever, the
proximal end of the piston lever being adapted to movably engage a surface or
edge of the piston controller and communicate movement to the piston lever.

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6. An engine as claimed in claim 5 wherein only one piston controller is disposed concentric to the rotatable member, the piston controller being a cylindrically shaped disk having one or more lobes on its circumferential surface.
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7. An engine as claimed in claim 5 or claim 6 wherein the piston controller is rotationally independent of the rotatable member.
8. An engine as claimed in any one of claims 5 to 7 wherein the piston controller is rotated in the opposite direction to the rotatable member.
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9. An engine as claimed in any one of claims 5 to 8 wherein the piston controller is utilised to control the time that the pistons spend at the either end of their stroke.
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10. An engine as claimed in any preceding claim wherein an energy stroke delivered to the rotatable member is longer than a combustion stroke of the piston.
11. An engine as claimed in any preceding claim wherein a compression stroke assists in supplying rotational energy to the rotatable member.
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12. An engine as claimed in any preceding claim wherein the proximal ends of piston lever from two or more diametrically opposed pistons are joined or linked so that excursion of a piston on an compression stroke assists the excursion of a diametrically opposed piston on a compression stroke.
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13. An engine as claimed in any preceding claim wherein one or more weights are associated with the one or more piston levers, centrifugal force acting on the weights to aid excursion of the pistons within the cylinders.
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14. An engine as claimed in any preceding claim wherein substantially all of the force exerted in movement between the cylinders and pistons is along the longitudinal axis of the cylinders thereby reducing the effect of cylinder bore side thrust.
15. An engine as claimed in any preceding claim wherein the force generated at the cylinders is delivered directly to an output shaft without the intervention of any other mechanical parts.
16. An engine as herein described with reference to any one of the accompanying drawings.